

## ABSTRACT OF THE DISCLOSURE

A demodulator controls gains of an RF-AGC amplifier and an IF-AGC amplifier so as to maintain an input level to the demodulator constant. In this case, the demodulator estimates a signal level of an RF input based on the sum of the gains directed to the both AGC amplifiers, and changes methods for distributing a gain to the AGC amplifiers, according to whether or not the signal level exceeds a predetermined Take Over Point. Further, a first detection and smoothing circuit detects an output level of the RF-AGC amplifier, and a second detection and smoothing circuit detects an output of a mixer. Besides, a comparison circuit controls the gain of the RF-AGC amplifier so that a difference between the output levels comes to be a predetermined value. With this structure, an automatic gain control circuit which can achieve high receiving sensitivity and low waveform distortion simultaneously can be realized even when manufacturing dispersion is caused.